

Big Cottonwood River Bridge No. 246
(Poor Farm Bridge)
Spanning the Big Cottonwood River
at Cottonwood Street (City
Road No. 165)

New Ulm
Brown County
Minnesota

HAER No. MN-71

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PHOTOGRAPHS
WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Engineering Record
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HISTORIC AMERICAN ENGINEERING RECORD
BIG COTTONWOOD RIVER BRIDGE NO. 246 (Poor Farm Bridge)

Location: Spanning the Big Cottonwood River at Cottonwood Street (City Road No. 165), New Ulm, Brown County, Minnesota

Date of Construction: 1907

Present Owner: City of New Ulm, Brown County, Minnesota

Present Use: The bridge was closed to traffic February 6, 1991 because of inadequate load capacity and structural deterioration, including the severing of one eye bar lower chord. It is slated for demolition in summer, 1993.

Significance: The bridge is a pinned Pratt through-truss which is significant for being fabricated and built by Security Bridge Company of Minneapolis, and for probable associations with the Minnesota Highway Commission.

Historians: Frances P. Alexander and Holly K. Chamberlain, The 106 Group Ltd., Bloomington, Minnesota, May 1993.

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LOCATION DESCRIPTION

The Big Cottonwood River Bridge No. 246 carries local vehicular traffic on unpaved Cottonwood Street (City Road No. 165) over the Big Cottonwood River in New Ulm, Brown County, Minnesota. Also known by the common name, the Poor Farm Bridge, this structure is sited on the edge of the Minnesota River Valley near the confluence of the Cottonwood and Minnesota rivers. Specifically, the bridge is located on the extreme southeast side of New Ulm, southwest of the Chicago and Northwestern Railway tracks, and 0.1 mile southwest of the junction of Trunk Highway 15 with Cottonwood Street. This two-lane bridge is an important farm-to-market road, providing direct access to the city from surrounding agricultural areas.

PHYSICAL DESCRIPTION

The Big Cottonwood River Bridge is a fixed, three span structure with a steel, Pratt, through truss main span and two I-beam, deck girder approach spans. The structure has pinned connections. The end posts and top chords of the truss are constructed of box girders, and there are lattice verticals and lattice top lateral bracing. The lower chords and diagonals are composed of eye bar members. The abutments are constructed of reinforced concrete, and there are concrete filled, steel cylinder piers situated at the junctures of the approach and main spans. The bridge has a reinforced concrete roadway. There are side railings composed of angle iron members. Bridge plates are located on both portals.

Crossing the Big Cottonwood River at 90 degrees, the bridge has a total length of 154 feet with the main span measuring 125.7 feet, and the approach spans measuring 14 feet each. The two lane bridge is 15 feet wide, and the maximum vertical clearance is 15.1 feet.

HISTORICAL INFORMATION

On July 18, 1907, the New Ulm City Council appointed a three-person committee to study bid proposals for construction of a new span over the Cottonwood River below Bentzin's Mill. It would replace an existing wooden bridge, deemed structurally deficient, known as Bentzin's Bridge, and

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provide better farm-to-market access between the city and nearby agricultural areas, and the then-new Brown County Home for the Poor. Construction of a new bridge had been under consideration since at least September, 1906, when the subject came before the city council. Two citizens, recorded in city council minutes as Weiland and Stegeman, came before the council on October 2, 1906 to request permission to strengthen the existing bridge at their own expense. The city council approved their plan, providing that the two citizens hold the city harmless in regards to any accidents which might occur due to their repair efforts.¹ The additional work was clearly seen as only a stopgap measure, however. Bridge replacement planning continued.

The creation of the bid proposal committee followed action by the council the previous January to appropriate \$2,500 for a new bridge.² The Bentzin's Bridge Committee, consisting of council members J.P. Graff, Ernst Wicherski, and Albert Pfaender, was directed to cooperate with the Board of County Commissioners in reviewing plans, specifications, and bids.³ County commissioners involved were Andrew J. Eckstein, Andrew Hooffman, Ole Jorgensen, Hans J. Knutson, Herman Polkow, August Erickson, and Louis Vogel.

Bids were sought on three different proposals: a steel bridge with a wooden floor, a span of reinforced concrete, and a steel bridge with a concrete floor. The bids were considered at a special meeting held August 19, 1907. Plans and bids for the first two types were rejected due to high costs of constructing an arch high enough over the river in the first case and maintenance in regards to the latter. After lengthy study and discussion, the Bentzin's Bridge Committee of the city council and the Board of County

¹Record of Proceedings of City Council, New Ulm, Minnesota, Book G, Meeting of 2 October 1906, p. 122; Meeting of 18 July, 1907, p. 206.

²A similar amount of aid was requested from the state. Minnesota Highway Commission documents indicate that a smaller amount was granted, but did not specify for what the funds were to be used.

³Other members of the City Council at the time were Ernst Gieseke, Willibald Elbner, and R. Nagel.

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Commissioners were authorized to enter into a contract on behalf of the city and county with the Security Bridge Company of Minneapolis, Minnesota to build a 125-foot span with 15-foot approaches which would cost \$6,800.⁴ The plans submitted by the Security Bridge Company were deemed by the bridge committee to be the best available, and the company's bid was the lowest for the type of bridge desired. The Security Bridge Company was a very active and important Minneapolis-based bridge construction firm in the late nineteenth and early twentieth centuries. The firm's principal designer, William S. Hewett, was a scion of a notable bridge-building family who had gone into business for himself and is credited with the development of pre-stressed concrete.⁵ The new bridge was opened to public traffic in December 1907, following a certification inspection by New Ulm city engineer H.F. Blomquist.

Minnesota Highway Commission

This new bridge was built in an era of roadway improvements throughout the state stimulated by the Minnesota Highway Commission. The commission was founded in 1905 to fill a gap in state services created by the 1858 state constitution decreeing that the state could not enter into contracts to fund internal improvements.⁶ Prior to the commission's formation, roads and bridges were built and maintained on a local basis, with the results being disorganized and inadequate in terms of number of bridges and miles of roadway constructed, and dubious in terms of maintenance. The Minnesota Highway Commission was instrumental in improving roads and bridges around the state by encouraging counties to improve their roads by providing funds and advice, and coordinating road construction activities statewide. The formation of the commission by the state legislature stemmed from public recognition that good roads helped agricultural

⁴Record of Proceedings of City Council, New Ulm, Minnesota, Book G, Special Meeting 19 August 1907, pp. 215, 217, and 218.

⁵Jeffrey Hess, "Minnesota Bridges, Multiple Property Documentation Form," National Register of Historic Places, 1988, p. 17-18.

⁶The state passed the Babcock Trunk Highway Plan in 1921 which gave the state control over the design and construction of roadways, and created the Minnesota Highway Department. Hess, p. 31..

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products move more quickly from farm to market. Increases in number of vehicles and weight of loads transported highlighted the need for better roads and bridges.

At its inception, the commission surveyed each county to collect baseline information such as how many miles of roadway existed, and held and attended many public meetings. In 1907, the commission began distributing allotments of state roadbuilding aid to counties. Concurrently, the commission provided advice on such topics as appropriate roadway materials and published sample bridge plans.⁷

Evidence of the influence of the advice of the commission on the Big Cottonwood River Bridge can be seen in large and small ways. First of all, New Ulm and Brown County took the subject of bridge replacement seriously, opting for long-lasting steel and concrete building materials rather than wood, as recommended in commission publications. Secondly, the contractor was a reputable company, rather than the highway commission-maligned shoddy operators. Thirdly, commission documents indicate that Brown County did receive an allotment of \$1,700.00 in state road aid in 1907 and 1908. Finally, the bridge was painted black, at a time when the most popular color for bridges was red. The choice of black conformed with recommendations of the highway commission, which advocated paint in general to protect bridge steel from deterioration, and black paint specifically. Rust would show up clearly on a black bridge and therefore indicate the need for maintenance.⁸

Repairs and Alterations

In May, 1916, the Big Cottonwood River Bridge suffered considerable damage from ice floes resulting from a break-up of an ice jam further up the river. Six supporting braces and many cracked nuts required extensive repair. As the city was responsible for bridge maintenance, it effected the necessary

⁷Ibid., pp. 14-15.

⁸Minnesota Highway Commission Annual Reports, 1906-1913. (St. Paul: Pioneer Press, Mnfg. Depts., Printers), 1913, pp. 7 and 62-63; Record of Proceedings of City Council, New Ulm, Minnesota, Book G, 5 May 1908, p. 287.

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repairs, which cost several hundred dollars. The repairs, including repainting, were completed by June 16.⁹

Records of bridge maintenance are lacking until later in the century. An April, 1974 inspection of the bridge revealed that it was in relatively good condition but in need of such maintenance as sealing of deck cracks, corrosion correction and prevention, repair of abutments, cleaning and freeing of a frozen truss expansion roller nest, and tightening of the diagonal braces on the piers.¹⁰ These repairs were done in September, 1974. The overall assessment from 1974 largely matched one made during an inspection just the year before which estimated that the bridge could be useful for another 20 years. However, just a few years later, in December, 1978, the bridge was added to the city bridge replacement program. The Big Cottonwood River Bridge had been deemed unsafe by the city engineering office, due to structural deficiencies and inadequate width. It was actually closed to traffic in February, 1991, having almost lasted for the 20 years predicted in 1973, due to the need for repairs to the lower chord. The city requested bridge replacement funds from the state in February, 1992, citing as reasons structural deficiency, inadequate width, and unsafe load capacity. The number of vehicles using the bridge per day at last actual count was 165 in 1978. The current estimate of usage, had the bridge still been open, was 198 vehicles per day. A bridge at this location was deemed still necessary for purposes of agricultural transportation and general city access.¹¹ Replacement funds being subsequently granted, plans for a new bridge proceeded.

PROJECT INFORMATION

This documentation was prepared in May, 1993 at the request of the City of New Ulm in compliance with Section 106 of the National Historic Preservation Act of 1966. Project historians were Frances P. Alexander and

⁹"Ice Floes Damage Structure," New Ulm Review, 10 May 1916.

¹⁰Robert E. Erickson, Letter to City Engineer Harley R. Schneider, Engineering Department Files, City of New Ulm.

¹¹Correspondence and Inspection Documents, Engineering Department Files, City of New Ulm.

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Holly K. Chamberlain of The 106 Group, Ltd., Bloomington, Minnesota.
Project photographer was Mike Whye.

SOURCES

"Bridge Question Is Settled; Council and Commissioners Get Together on
Hewitt Plans," New Ulm Review, 21, August 1907.

"Cottonwood River Bridge," Minnesota Historic Places Survey Form, undated.

Engineering Department Files, City of New Ulm.

Hess, Jeffrey. "Minnesota Bridges, Multiple Property Documentation Form."
National Register of Historic Places Nomination, 1988.

"Ice Floes Damage Structure Crossing Cottonwood Near Mill," New Ulm
Review, 10 May 1916.

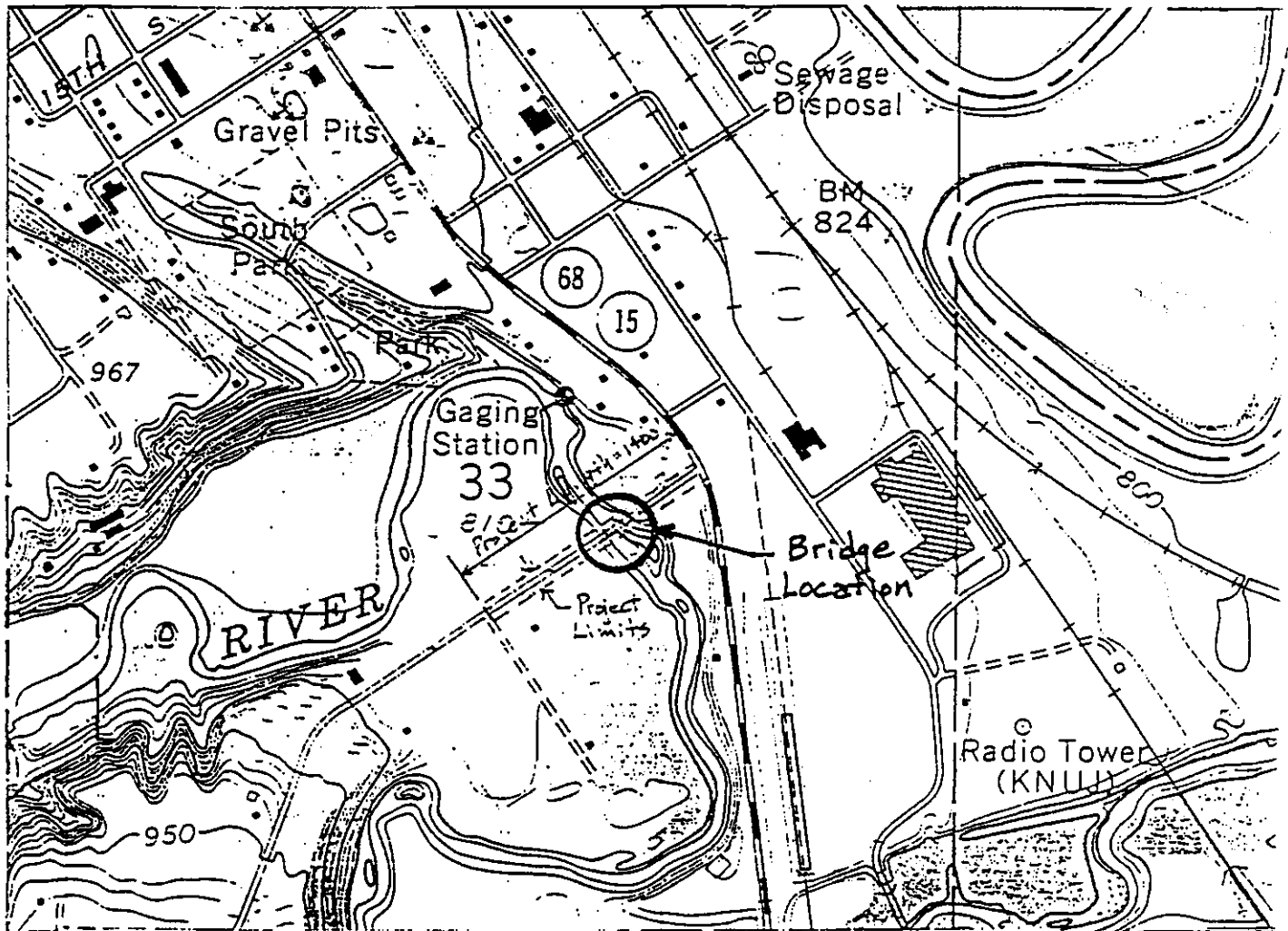
Minnesota Highway Commission Annual Report, 1906-1913. St. Paul:
Pioneer Press, Mnfg. Depts., Printers. 1913.

Minnesota Historical Society SHPO File No. 92-3640.

"New Bridge," New Ulm Review, 18 December 1907.

Record of Proceedings of City Council, New Ulm, Minnesota, Book 6, 1907-
1908.

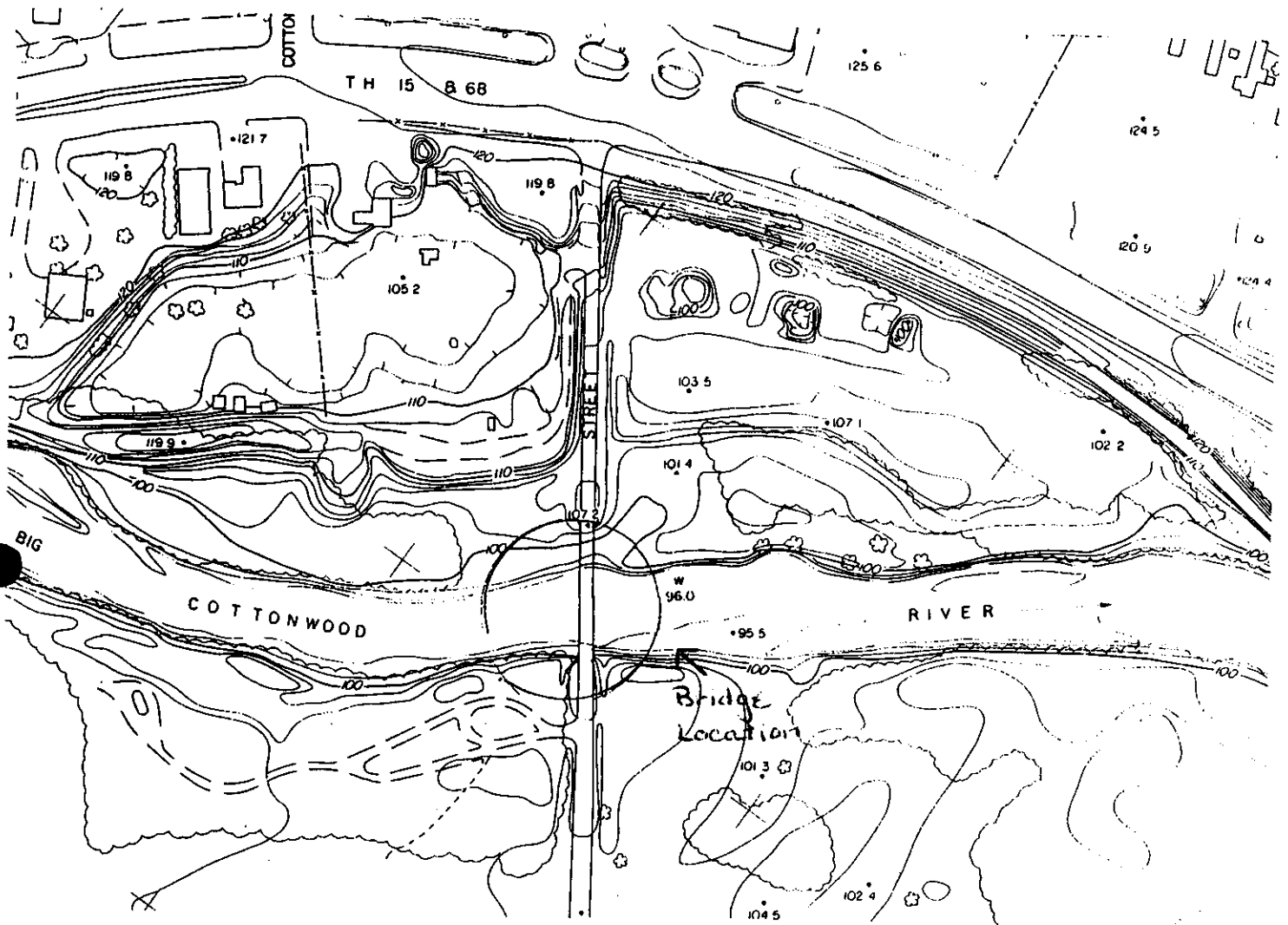
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North ↑

Source: USGS New Ulm Quad, 7.5', 1964
Scale: 1" = 1000'

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North ↗

Source: Topographic Map, New Ulm, Minnesota
Brown County, Sheet J-3, 1983
Scale: 1" = 200'